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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,315	03/29/2001	Fumitoshi Karube	1163-0330P	1861

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EXAMINER

REKSTAD, ERICK J

ART UNIT PAPER NUMBER

2621

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/820,315	Applicant(s) KARUBE ET AL.	
	Examiner Erick Rekstad	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is a Second Final Rejection for application no. 09/820,315 in response to the amendment filed on June 6, 2006 wherein claims 1 and 3 are presented for examination.

Claim Objections

Claim 1 is objected to because of the following informalities: The claim states "an instruction memory for holding an instruction to be and" it is assumed by the examiner that the claim should state " an instruction memory for holding an instruction to be processed; and". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,995,513 to Harrand et al in view of US Patent 6,434,196 to Sethuraman et al. and "Video DSP Architecture for MPEG2 CODEC" by T. Araki et al.

[claim 1]

As shown in Figure 3, Harrand teaches an image processing device comprising a processor (16), multiple processing units (30-32), a VLC (34), external data interface (ITF), and instruction memory for decoding the instruction held by said instruction

memory, and for performing a programmed control operation on the multiple processing units, VLC processor, and external data interface means (Col 3 Lines 19-39, Col 5 Lines 36-39, Col 7 Lines 34-42 and 52-54). Harrand teaches the multiple processing units perform motion estimation, DCT, IDCT, quantization and reverse quantization (Col 5 Lines 49 and Col 6 Lines 11-14, Fig. 3). Harrand further teaches the processing units and the VLC unit are configured to be connected to an external memory through internal data bus (C) and an external data interface (ITF) in order to be program-controlled by an outside unit (Col 7 Lines 34-66, Col 8 Lines 6-10 and Lines 30-40). Harrand does not teach the use of SIMD calculating unit for performing operations, such as motion compensation, motion prediction, DCT processing, IDCT processing, quantization, and reverse quantization by means of a pipeline operation unit that can be program controlled by an outside unit. Harrand further does not teach the VLC performing both encoding and decoding.

As shown in Figure 1 and 14B, Sethuraman teaches an image processing device (100, Fig. 1) comprising an SIMD calculating means (1400, Fig. 14B) for performing operations, such as motion compensation, motion prediction, DCT processing, IDCT processing, quantization, and reverse quantization by means of a pipeline operation unit that can be program controlled by an outside unit in order to process multiple macroblocks at the same time with a single instruction stream (Col 34 Lines 40-45 and Lines 54-67, Col 35 Lines 1-9 and Lines 20-41, Figs. 1, 14A and 14B). Sethuraman does not teach a VLC performing variable-length decoding. It would have been obvious to one of ordinary skill in the art at the time of the invention to replace the

processors of Harrand with the SIMD processor of Sethuraman in order to process multiple macroblocks at the same time with a single instruction stream.

Araki teaches the use of a VLC/VLD processor with a VPCU in an image processor in order to flexibly support the specifications of MPEG1, MPEG2, as well as other standards (Page II-418 Second column Second paragraph, Fig. 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to replace the VLC and VLD of Harrand with the VLC/VLD of Araki in order to flexibly support multiple video formats.

[claim 3]

Harrand further teaches the instructions stored in ROM (Col 7 Lines 53-54).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

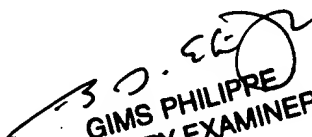
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Rekstad whose telephone number is 571-272-7338. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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PRIMARY EXAMINER

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